The long runs of weekends and the improvement of the aerobic capacity.

It is common in the jargon of the distance runners to hear them say: how's it going your long distance run for the week end? That pace leaves myself exhausted, my long run of Sunday was fine, I was mashing many kilometers, in short many definitions and terms to refer to an a session of long run training of Sunday, or Saturday in some cases.

Once the investigators and physiologists as regards in sport defined the different areas of aerobic training, taking in considerations the changes that those intensities of exercise produce in the organism, we began to heard different denominations for each running rhythms, it is as well as it is spoken of trot or warming pace, recovery pace, trot for long runs and others.

With the time that long easy run at uniform pace for weekends it is no longer used only to acquire a bigger aerobic capacity, but it is also demanded to reach others objectives: either as a slow recovery runs to a fast training pace or competition rhythms, to improve the aerobic capacity and the aerobic potency, to lose fat and even to simulate similar paces to those used in the competitions.

The long trot, besides the psychological impact that has in the runner, also help the individual's organic resistance, and depending of the combinations that it is made of the paces, it drives to a decrease of the cardiovascular frequency and to obtain a t more efficient heart.

With slow rhythms we improve the aerobic capacity and achieve that our muscles consummate, the fats to be used as fuel for the exercise in an appropriate way, and its duration of those runs can surpass one hour and an a half to two hours and up to three hours of slow pace.

With paces something quicker we improve the aerobic potency, but that increment of the pace of run also lead to an increment of the oxygen necessities, it is for that, that if we want to improve the efficiency of our pupils we should develop their aerobic potency until to reach approximate levels of 80% of their maximum volume of oxygen consumption (Vo2max) and they require to have a very good aerobic base.

When improving the aerobic capacity (runs where the oxygen is the main responsible for the energy supply, the use of the fats is the most economic source where to find this energy), we are able to obtain a more efficient heart, with a bigger cavity of the left ventricle, as well as a biggest thickness of their walls. We diminish the number of pulsations per minute. In my times of runner we made some bets among friends to see who had fewer pulsations per

minute, and my slowest registration of pulsations was of 30 beats per minute (many times I won the bets).

Also with the improvement of the aerobic capacity the systolic volume increases which makes that a highest quantity of oxygen from the circulating blood is extracted.

Besides the benefits of the improvement of the aerobic capacity already mentioned, there is another very important physiologic benefits, as an increment in the size and number of the mitochondria, more oxidation of the fats and a more efficient use of the carbohydrates are obtain.

As a practical example of the before said, and as a guide for a female runner which time in the 5 km is between 18 and 19 minutes, between 37 and 40 minute for the 10 km, and that for the half marathon run her time is approximately among one hour 23 minutes and one hour 25 minutes, her paces for slow runs for kilometer would be of approximately 4.30 to 4.55 minutes, and it would be good to improve her aerobic capacity, she should maintain at least one hour of running at that intensity. If she wants to improve in a quicker and more efficient way that aerobic capacity, she should carry out some sessions of trainings to a pace of 4.10 and 4.25 minutes per km to exceed the 45 to 60 of running.

If the objective is to improve as much possible the capacity as the aerobic potency, her run pace should be from the 3.40 to 3.55 minutes range for kilometer and it will be used in specific trainings and runs in the area of anaerobic threshold that could be reaching up to 10 km and it is the one´s nearer rhythm to the competition of 10 km or a little longer.

If we take the heart rate as a reference for the same hypothetical runner, those trainings at slow pace will be those where the heart frequency is located approximately between the 60 and 80% of the maximal heart rate (MHR). Moderated rhythm among 75 and 85% of the heart rate frequency and this kind of training should be the one which occupied the biggest volume in the training program.

Finally, the fastest pace in races, in which we combine aerobic capacity and aerobic potency, should be find by reaching training at percentages near to 90 and 95% of the maximal heart rate.

In conclusion, to obtain good results in competitions, and to be in good state of health it is necessary to have good aerobic base, this will allow an efficient improvement of the aerobic potency joined to the improvement of other qualities like maximum consumption of oxygen, higher anaerobic threshold, in combination with a good running economy, good technique and strength.